
Missouri Market Development Program

Annual Report for Fiscal Year 2012

(July 1, 2011 – June 30, 2012)



EIERA
Environmental Improvement and Energy Resources Authority

Missouri Market Development Program

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Missouri Market Development Program Improves Missouri's Economy and Environment

Introduction

In 1990, the Missouri General Assembly directed the Environmental Improvement and Energy Resources Authority (EIERA) to establish the Missouri Market Development Program to promote the development and maintenance of markets for recovered materials. The EIERA is a quasi-governmental agency, with a Governor appointed bi-partisan Board, which serves as the financing arm of the Department of Natural Resources. The Missouri Market Development Program is housed in the EIERA in order to bridge economic development and environmental interests.

Funding

In Fiscal Year 2012, the Missouri Market Development Program was allocated \$800,000 from Missouri's Solid Waste Management Fund.

Purpose

The Missouri Market Development Program promotes the development and maintenance of markets for recovered materials and recycled content products throughout Missouri by providing financial incentives, technical assistance and informational services to businesses, governments and other organizations.

Recycling market development helps to ensure that recycling will expand its role in a sustainable Missouri economy, create jobs, conserve resources, contribute to a quality environment, and reduce reliance on Missouri's landfills for disposal of solid waste.

Highlights: Five Years in Review

Recycling market development is working. Since it was established in 1990, the Market Development Program has provided project assistance, contractual services, and information services to help Missouri businesses develop new products, new markets and purchase manufacturing and processing equipment. The program is operated by the Environmental Improvement and Energy Resources Authority.

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Economic Benefits

The Missouri Market Development Program helps businesses turn byproducts into new products, helps potential buyers find Missouri recycled products to meet their needs and helps Missouri manufacturers of recycled products find markets for their goods.

Recycling market development helps to ensure that recycling will expand its role in a sustainable Missouri economy, create jobs, conserve resources, contribute to a quality environment and reduce reliance on Missouri's landfills for disposal of solid waste.

In fiscal years 2008 to 2012, the Missouri Market Development Program awarded more than \$2.1 million to 61 organizations, creating an estimated 131 jobs with an estimated payroll of more than \$10.6 million annually.

From 2008 to 2012, the Missouri Market Development Program awarded more than \$2.1 million to 61 organizations. Most of this money, approximately \$2 million, was awarded to businesses to assist in the purchase of equipment to process recycled materials or create new products from recycled materials. The remaining more than \$159,000 was awarded for technical assistance, allowing recipients to acquire business and professional services needed to evaluate potential markets and technical requirements for recycled materials and products.

These investments in businesses by the Market Development Program result in jobs for Missourians. EIERA estimates that business assistance in fiscal years 2008 through 2012 created an estimated 131 jobs across Missouri. Payroll for these additional direct and indirect jobs is estimated to be more than \$10.6 million. * † As businesses that received technical assistance enter new markets with new products, they may create hundreds more jobs.

The Missouri Market Development Program's Fiscal Year 2012 investments in six Missouri businesses helped to leverage more than \$457,000 in total investment, created nine full-time and five part-time Missouri jobs, and diverted more than 3,900 tons annually from Missouri landfills. The avoided disposal cost for materials used in these projects is estimated to be almost \$187,000 each year.

Investment by the program leverages investment by recipients. In fiscal years 2008 through 2012, \$1 of award from the program was typically matched by more than \$2 of recipient investment. The program awards resulted in a total of more than \$6 million in spending in the Missouri economy.

* The employment multiplier for manufacturing is 2.6. Missouri Economic Research and Information Center (MERIC), *Missouri Economic Impact Brief: Manufacturing Industries* (Jefferson City: MERIC, 2011).

† Using a payroll of \$32,700 per job based on the 2000 RW Beck REI study.

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Environmental Benefits

The Market Development Program provides assistance to create markets for recycled materials and new products made with recycled materials. The most significant environmental impacts from using recycled materials are energy savings and pollution reduction by avoiding the need to process virgin materials. Additional benefits include reduced manufacturing waste and longer life for landfills.

From 2008 to 2012, business assistance from the program diverted more than 571,000 tons of recyclable waste annually from landfills to new uses. The annual cost savings associated with this reduction of waste is estimated to be more than \$27 million.[‡] Technical assistance projects have the potential to recycle an additional 52 million tons of waste as recipients enter new markets with new products based on recycled materials.

In fiscal year 2012, projects supported by the program diverted more than 3,900 tons of recyclable waste annually from landfills to new uses. The annual cost savings associated with this reduction in waste is estimated to be almost \$187,000.

Looking to the Future

Recycling market development is working. The Market Development Program helps protect Missouri's environment while also stimulating and growing our economy.

Success in developing markets for recovered materials truly requires a collaborative effort. To that end, the Missouri Market Development Program welcomes input and feedback from our partners and stakeholders. During fiscal year 2012, EIERA conducted a series of focus groups throughout Missouri to formalize our input gathering process. In this process and through informal discussions with program participants, representatives of the solid waste industry and other interested parties provided feedback about the program and suggestions for continuous improvement to best adapt to economic, technical and environmental changes. In response to these important discussions, the Missouri Market Development Program revised its financial award eligibility requirements, enabling Missouri businesses and organizations to apply for increasing amounts of assistance where significant increases in job creation, materials diversion and applicant cash contribution are part of project parameters.

[‡] Based on a landfill fee of \$47.50 per ton.

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Projects

The Missouri Market Development Program assisted six Missouri businesses with awards totaling approximately \$205,000 in fiscal year 2012. These awards leveraged more than \$457,000 in total investment. This financial assistance from the program helped businesses purchase equipment and develop new products and markets.

Over the last five fiscal years, 2008 to 2012, the Missouri Market Development Program assisted 61 Missouri businesses and organizations. These awards totaled more than \$2.1 million and leveraged total investments of more than \$6 million.

Fiscal Year 2012 Projects Statewide

Total Awards: \$205,025

Estimated Jobs Created: 9 full-time, 5 part-time

Waste Diverted Annually: 3,943 tons

B&G Skid Removal, LLC (New Bloomfield) was awarded \$50,000 to purchase a horizontal grinder costing \$196,000 to produce colored mulch and biofuel from scrap pallet waste. The grinder makes mulch from waste generated by B&G's pallet recycling operation. Because of the energy content of the ground product, it is also marketed in Columbia's biofuel market. B&G anticipates creating one full-time job and diverting 3,200 tons of waste annually.

Enginuity, LLC (Hartville) was awarded \$50,000 to purchase molds costing \$110,000 that would enable them to produce "Build-a-Barrel" panels from recovered plastics. The product is modular molded panels that fit together like Legos to produce water storage containers of various sizes and shapes. A past participant, Enginuity has already become a name-brand product in the rainwater harvesting market. Their customers include Ace, Menard's and Sam's Club. The rainwater harvesting market is growing, both in urban and developing areas, and this new product solves logistical issues with distributing water storage containers with a do-it-yourself concept that is attractive and cost effective. Enginuity currently employs 15 people in plastic injection molding, metal stamping, mold design and fabrication, 3D modeling, engineering support, manufacturing and assembly for a variety of products. It anticipates creating two full-time and five part-time jobs because of this project and diverting 250 tons of waste annually.

Freiezo, LLC (St. Peters) was awarded \$10,000 toward a \$24,750 project to perform finite element analysis and computational fluid dynamic simulation analysis of its design for a vertical axis wind turbine that will be produced from recycled materials. The Missouri Market Development Program previously

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assisted the company in determining how to incorporate waste plastic in the production of blades, and each unit will use approximately 100 pounds of recycled plastic. This performance analysis will make the product more competitive against existing horizontal axis turbines that are less efficient.

Prock Operations, Inc. (St. James) was awarded \$50,000 to purchase a commercial-grade table router costing \$78,900 that will enable the company to add a new business of line of manufacturing products from solid surface (Corian, Formica, Pionite and other) scrap. Prock anticipates creating three full-time jobs and diverting 24 tons of waste annually.

Real Greenius, LLC (Billings) was awarded \$8,775 towards an \$11,700 project to locate feedstock materials for the production of storm shelters and test shelter designs. Project JOMO (Joplin, MO) was developed after the tornado that destroyed one-third of the City of Joplin. The goal is to make affordable storm shelters from composite building blocks produced by Real Greenius that will meet FEMA guidelines for design and construction. Real Greenius hopes to produce a FEMA-approved shelter that can be sold for less than \$2,000.

Remains, Inc. (St. Louis) was awarded \$36,250 to purchase a shredder costing \$72,500 to provide support for the company's archer target fiber processing line at its textile recycling operation. The shredder processes pulp for the production of specialty papers and grinds plastic pallets. The archer target fill material will be of a new grade used by three target manufacturers. Remains anticipates creating three full-time jobs and diverting 460 tons of waste annually.

Fiscal Years 2008 to 2011 Projects by Region

Total Awards: \$1,906,083

Estimated Jobs Created: 109 full-time, 8 part-time

Waste Diverted Annually: 567,555 tons

Kansas City Area

Total Awards: \$277,483

Estimated Jobs Created: 8 full-time

Waste Diverted Annually: 23,882 tons

Eharas Services & Solutions, Inc. (Liberty) was awarded \$50,000 to purchase a grinder costing \$579,496 to expand its waste wood recycling operation. The project diverts 18,240 tons of waste annually and created two jobs.

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EXT, Inc. (Excelsior Springs) was awarded \$46,000 to refurbish a granulator/pelletizer that enables it to increase the processing of reclaimed plastics. The project diverts 200 tons of waste annually and created two jobs.

Foundation Workshop, Inc. (Grandview) was awarded \$2,350 for a project that cost \$9,350 for the design of a recycling center. Another award to Foundation Workshop of \$35,000 aided its purchase of a plastic bottle sorter system that cost \$47,133 to expand its pill bottle recycling operation. This project diverts 156 tons of waste annually and created two jobs.

Johnson Controls (Kansas City) was awarded \$3,000 for a project that cost \$9,800 to identify markets for waste Styrofoam.

KTSI, Inc. (Kansas City) was awarded \$7,000 for a project that cost \$10,000 to research textile recycling operations for a cooperative of manufacturers in Missouri.

Missouri Organic Recycling, Inc. (Kansas City) was awarded \$33,500 to purchase a bagging system that cost \$67,000 to expand the company's compost product line. The project diverts 4,500 tons of waste annually.

Performance Roofing Systems, Inc. (Kansas City) was awarded \$50,000 to purchase a shredder to recycle waste roofing membranes, which are used to make new roofing membranes. The project diverts more than 450 tons of waste annually and created at least one job.

Windswept Worm Farm (Blue Springs) was awarded \$35,000 to purchase a continuous flow worm machine costing \$70,000 to improve processing of waste and harvesting and packaging of worm castings. The project diverts 336 tons of waste annually and created one job. The Missouri Market Development Program also awarded Windswept Worm Farm \$3,500 for a \$7,000 project to research new markets.

Northeast Area

Total Awards: \$393,500

Estimated Jobs Created: 15 full-time, 6 part-time

Waste Diverted Annually: 40,957 tons

Alternative Community Training, Inc. (Columbia) was awarded \$50,000 to purchase a VHS tape disassembler costing \$71,000. VHS tape components are separated and ground into marketable commodities. The project diverts 200 tons of waste annually and created three jobs. An additional award of \$5,000 was made for a \$9,000 project to investigate additional markets for these products.

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Asphalt Products, Inc. (Jefferson City) was awarded \$50,000 to purchase a stationary cold feed plant that cost \$95,000 to introduce ground shingles to its asphalt plant. The project diverts 10,000 tons of waste annually and created one part-time job.

B&G Skid Removal, LLC (New Bloomfield) was awarded \$50,000 to purchase a horizontal grinder that cost \$196,000 to produce colored mulch and biofuel from scrap pallet waste. The project diverts 3,200 tons of waste annually and created one job.

Braik Brothers Tree Care & Green Waste Recycling, LLC (Columbia) was awarded \$50,000 to purchase a tub grinder that cost \$400,000 to increase its recovery of waste for conversion to mulch, compost, and animal bedding. The project diverts 2,500 tons of waste annually and created two jobs.

Coon Manufacturing, Inc. (Spickard) was awarded \$50,000 to purchase and rebuild a rotational molding system that cost \$98,060. The equipment will be used to manufacture polyethylene products from recycle feedstock. The project diverts 665 tons of waste annually and created two jobs.

Hampton Alternative Energy Products (Triplett) was awarded \$50,000 to install an anaerobic digester at Hampton Feed Lot, Inc., to produce methane for electricity generation and soil amendments from animal waste and waste from ethanol production. The project diverts 21,462 tons of waste annually and created two jobs.

Loganbill Enterprises, Inc. (Latham) was awarded \$35,000 to purchase a \$70,000 mulch colorizer that uses less water while processing more mulch. The project diverts 2,750 tons of waste annually and created four jobs.

Orco Industries, LLC (LaGrange) was awarded \$3,500 for a project that cost \$10,000 to locate additional sources of recovered HDPE, which it uses to manufacture containers.

Randolph County Sheltered Industries (Moberly) was awarded \$50,000 to purchase a grinder and conveyor that cost \$75,000 to produce mulch from wood pallets. The project diverts 180 tons of waste annually and created six part-time jobs.

St. Louis Area

Total Awards: \$367,500

Estimated Jobs Created: 26 full-time

Waste Diverted Annually: 118,600 tons

Arcobasso Foods, Inc. (St. Louis) was awarded \$6,000 for a project that cost \$12,000 to identify alternatives for the disposal of fat generated by its food processing operation.

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The Doe Run Company (St. Louis) was awarded \$3,500 for a project that cost \$7,000 to identify ways to collect cardboard for recycling.

Double G Brands, Inc. (Pacific) was awarded \$5,000 for a project that cost \$10,000 to analyze potential products and markets for waste ham bones generated from food processing operations. The Missouri Market Development Program also awarded \$50,000 to Double G Brands to purchase a smoker that cost \$125,000. The smoker processes ham bones to make them safe for sale for pet consumption. This project diverted 100 tons of waste annually and created four jobs.

Earthwise Engineered Wall Systems (Lake Saint Louis) was awarded \$6,000 for a project that cost \$12,000 to develop sources and uses of recycled polypropylene and fly ash in the manufacture of insulated concrete forms.

Eco Recycling, Inc. (Pagedale) was awarded \$50,000 to purchase a screen costing \$80,000 to expand an operation that crushed concrete and asphalt and shredded roofing shingles. The project diverts 93,000 tons of waste annually and created 12 jobs.

EMA, Inc. (St. Louis) was awarded \$5,000 for a project that cost \$7,500 to analyze the market for scrap glass recovered from window manufacturers.

Fick Supply Service, Inc. (Wildwood) was awarded \$50,000 to purchase a grinder that cost \$628,400 to expand its mulch and compost operation. The project diverts 18,750 tons of waste annually and created one job.

Firmenich, Inc. (St. Louis) was awarded \$5,000 for a project that cost \$10,000 to explore alternatives for the disposal of waste vanilla and coffee beans.

Freiezo (St. Peters) was awarded \$3,000 for a project that cost \$8,000 to investigate recycled plastic that might be used to manufacture wind turbines for electrical power generation. Another award of \$5,000 supported a project to measure efficiency and the conversion of mechanical energy to electrical energy for turbines constructed from recycled plastic.

Hansen's Tree Service & Environmental Wood Resources (O'Fallon) was awarded \$50,000 to purchase a mulch colorization unit to more efficiently process wood waste and sell additional product. The project diverts 5,900 tons of waste annually and created one job.

Happy Apple Company (Union) was awarded \$5,000 for a project that cost \$10,000 to explore alternatives to landfilling waste apple pomace from its cider production operation, particularly to see if the pomace may be dried and used as an additive to animal feed.

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Highland Homes (University City) was awarded \$5,000 for a project that cost \$10,000 to analyze the cost effectiveness of purchasing a grinder to process construction waste.

Lambert-St. Louis International Airport (St. Louis) was awarded \$9,000 for a project that cost \$13,000 to create a plan for food waste collection and recycling.

National Cart Co. (St. Charles) was awarded \$5,000 for a project that cost \$7,500 to identify markets for scrap casters generated by its shopping cart refurbishing operation.

Nike IHM (St. Charles) was awarded \$50,000 to purchase a pelletizer that cost \$350,000 that enables it to process scrap plastic to recycle into its products. The project diverts 550 tons of waste annually and created four jobs.

Rustique Enterprises, Inc. (O'Fallon) was awarded \$50,000 to purchase equipment that cost \$100,000 to manufacture insulated vertical siding panels made from recycled PVC. The project diverts 300 tons of waste annually and created four jobs.

St. Louis Help (St. Louis) was awarded \$4,000 for a project that cost \$8,000 to identify ways to expand its recycling and reuse program, which supports access to free assistive technology to people with mobility problems.

Seiler Plastics Corporation (St. Louis) was awarded of \$3,000 for a \$7,500 project to analyze the market for industrial painting stencils that could be made from scrap plastic generated by its operations.

Turfline Incorporated (Moscow Mills) was awarded \$3,000 for a \$6,000 project to identify landfill alternatives for used wooden shipping containers.

Southeast Area

Total Awards: \$144,900

Estimated Jobs Created: 3 full-time

Waste Diverted Annually: 4,810 tons

BFC Composting (Perryville) was awarded \$50,000 to purchase a compost turner and tube filler to expand its operations. The project diverts 3,360 tons of waste annually and created two jobs.

Black River Asphalt, LLC (Ellington) was awarded \$6,500 for a project that cost \$12,000 to study the feasibility of using crushed glass and waste rubber in asphalt products.

Caterpillar High Performance Hose Group (Pomona) was awarded \$3,400 for a project that cost \$10,800 to study the feasibility of recycling waste and scrap rubber generated at the facility.

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Ceramo Company, Inc. (Jackson) was awarded \$6,500 for a project that cost \$13,000 to explore alternatives for disposal of clay pottery waste.

Chapman Custom Products (Rolla) was awarded \$12,000 for a project that cost \$150,000 to develop a marketing strategy for products made from solid-surface waste materials.

Hardwoods of Missouri (Birch Tree) was awarded \$5,000 for a project that cost \$10,000 to study the feasibility of using wood dust and chips to manufacture backers for laminate flooring.

Noranda Aluminum, Inc. (New Madrid) was awarded \$6,500 for a project that cost \$13,000 to study the feasibility of diverting wood pallet waste from its operations.

Ozark Foothills Regional Planning Commission (Poplar Bluff) was awarded \$5,000 for a project that cost \$10,000 to analyze markets for materials collected at its recycling facility and explore additional opportunities in recyclable materials collection and marketing.

Sikeston Community Sheltered Workshop (Sikeston) was awarded \$50,000 to purchase a grinder that cost \$222,198 to produce mulch and animal bedding from wood waste. The project diverted 1,450 tons of waste annually and created one job.

Southwest Area

Total Awards: \$485,332

Estimated Jobs Created: 70 full-time, 2 part time

Waste Diverted Annually: 357,986 tons

Advanced Concepts Technology LLC (Willard) was awarded \$3,000 for a project that cost \$10,000 to study the feasibility of highway center-cable support posts made from recycled scrap tires.

All Points Recycling, LLC (Cassville) was awarded \$45,000 to purchase a machine to densify expanded polystyrene (EPS). All Points Recycling packages EPS from several sources for sale to a recycling mill. The project diverts 224 tons of waste annually and created two jobs.

Boreflex Industries, Inc. (Mountain Grove) was awarded \$4,000 for a project that cost \$5,000 to investigate the potential to use recovered plastic in the production of its products.

Bryant Plastics, Inc. (Gainesville) was awarded \$50,000 to purchase equipment to shred large PVC parts that were previously landfilled. The PVC is recycled into its products. This project diverts 240 tons annually and created three jobs.

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Cedar Ridge Innovations, LLC (Springfield) was awarded \$50,000 to purchase a carpet shearing saw that cost \$68,000 to process scrap carpet and created feedstock for plastic manufacturing. The project diverts 672 tons of waste annually and created five jobs.

Central Missouri Poultry Producers (Barnett) was awarded \$23,332 to purchase a compost bagging system that cost \$31,100 to expand its operation. The project diverts 200 tons of waste annually and created two part-time jobs.

Chadwick R-1 School District (Chadwick) was awarded \$5,000 for a project that cost \$8,000 to examine the feasibility of making compost from sawdust remaining on the school's property and food waste.

Enginuity, LLC (Hartville) was awarded \$50,000 to purchase equipment that cost \$100,000 to manufacture downspout diverters from recycled polycarbonate. Downspout diverters enable the diversion of rainwater from gutters to a rain barrel. The project diverts 2,500 tons of waste annually and created nine jobs.

GT Management, LLC (Joplin) was awarded \$50,000 to purchase a screener that cost \$100,000 to screen crushed concrete debris into graded material that may be used in new ready-mix concrete and asphalt. The project diverts 6,000 tons of waste annually and created two jobs.

3-G Processing, LLC (Mountain Grove) was awarded \$50,000 to purchase a high-pressure dryer/cooker that cost \$910,000 to expand its food waste recovery operation. The project diverts 260,000 tons of waste annually and created 30 jobs. This is a huge economic and environmental benefit for this community of 4,789 people as well as to southwest Missouri.

Pillar Group, LLC (Monett) was awarded \$5,000 for a project that cost \$10,000 to develop a web site and marketing materials and to develop strategies to expand the number of suppliers and users of spent powder paint. Previous technical assistance from the Missouri Market Development Program identified a potential market for spent powder paint in China.

Swift Construction Company, Inc. (Joplin) was awarded \$50,000 to purchase equipment that cost \$105,000. The equipment is used to process recovered asphalt roofing shingles for use in road construction. The project diverts 75,000 tons of waste annually and created one job.

Thomas Brothers, Inc. (Mansfield) was on two occasions awarded \$50,000 to purchase two centrifuges that cost \$100,000 each that uses to recover oil, paper, plastic and other materials from food waste. These projects divert 31,700 tons of waste annually and created 18 jobs.

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Developing Markets through Cooperation

Partners

Success in developing markets for recovered materials truly requires a collaborative effort. The cooperation and assistance of several agencies and organizations have been instrumental in the success of the Missouri Market Development Program.

Department of Economic Development

During the fiscal year, the Missouri Market Development Program continued its working relationship with the Department of Economic Development in support of program objectives. The Missouri Market Development Program and DED coordinate direct assistance to businesses to improve sales and purchases of Missouri products made from recyclable materials.

Department of Natural Resources

The Missouri Market Development Program works closely with the Department of Natural Resources in its administration of the Solid Waste Management Fund and its waste reduction and recycling efforts. The Missouri Market Development Program coordinates priorities and evaluation of activities with the department's Solid Waste Management Program.

Office of Administration

The Missouri Market Development Program, in cooperation with the Office of Administration, promotes recycling in state agencies. The Missouri Market Development Program works with the Office of Administration on the Missouri Interagency Recycling Council and in development of the annual State of Missouri Recycling and Waste Reduction Report.

Solid Waste Advisory Board

The Missouri Market Development Program provides updates on its activities to the Solid Waste Advisory Board. The Solid Waste Advisory Board is made up of the chairperson of each of the 20 Solid Waste Management Districts, three citizen representatives and two representatives of solid waste management industry.

Missouri Market Development Program Steering Committee

Staff from the Missouri Market Development Program, EIERA, DED, and DNR's Solid Waste Management Program comprises the Market Development Program Steering Committee. The steering committee

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evaluates financial assistance applications and technical assistance proposals submitted to the Missouri Market Development Program and makes funding recommendations to the EIERA board for approval.

Mid-America Council of Recycling Officials

The Missouri Market Development Program represents Missouri on the 14 state Mid-America Council of Recycling Officials. As a member of MACRO, the Missouri Market Development Program strengthens and complements Missouri's recycling efforts.

Missouri Recycling Association

Missouri Market Development Program staff is actively involved in the activities of the Missouri Recycling Association, Missouri's collective voice for recycling, waste reduction and sustainability issues.

Missouri Waste Control Coalition

The Missouri Market Development Program supports the efforts of the Missouri Waste Control Coalition.

Bridging the Gap

The Missouri Market Development Program continues to work with Bridging the Gap on the Kansas City By-product Synergy Initiative develop a process to implement the principals of byproduct synergy statewide.

Missouri Enterprise

Support for the Missouri Market Development Program is made available through an agreement with Missouri Enterprise. With offices located throughout the state, Missouri Enterprise staff provides assistance to program applicants and shares information with businesses and governments regarding recycling markets.

Missouri Association of Councils of Local Governments

In fiscal year 2012, an agreement with Missouri Association of Councils of Local Governments further expands the reach of the Missouri Market Development Program through regional "material fairs" that promote end markets for recovered materials. Materials fairs were conducted in St. Joseph, Warrensburg and Maryville during fiscal year 2012. These fairs are an opportunity for local businesses to learn about opportunities for recovered materials use or to showcase existing products and processes. Plans were also developed for upcoming fairs in Kansas City, Osage Beach, Dexter, West Plains and Hannibal.

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Appendices

Appendix 1: Business Assistance- Equipment

The Market Development Program provides project assistance to Missouri businesses to help them purchase equipment to process recycled materials or make products that incorporate recycled materials. Financial assistance may cover up to 75 percent of a project, up to a maximum of \$50,000.

Table 1. Summary of Fiscal Year 2012 Project Assistance

| Company | City | Material | Estimated Tons Diverted Annually | Estimated New Jobs | Award | Total Amount Leveraged | Estimated Payroll Addition* | Estimated Cost Savings Annually† |
|------------------------|----------------|-----------|----------------------------------|----------------------------|-----------|------------------------|-----------------------------|----------------------------------|
| Enginuity, LLC | Hartville | Plastics | 250 | 2 full-time 5 part-time | \$50,000 | \$110,000 | \$147,150 | \$11,875 |
| B&G Skid Removal, LLC | New Bloomfield | Wood | 3,200 | 1 full-time | \$50,000 | \$196,000 | \$32,700 | \$152,000 |
| Prock Operations, Inc. | St. James | Composite | 24 | 3 full-time | \$50,000 | \$78,900 | \$98,100 | \$1,140 |
| Remains, Inc. | St. Louis | Cloth | 460 | 3 full-time | \$36,250 | \$72,500 | \$98,100 | \$21,850 |
| Total | | | 3,934 | 9 full-time 5 part-time | \$186,250 | \$457,400 | \$376,050 | \$186,865 |

* Payroll estimated as \$32,700 per job based on the 2000 RW Beck REI study estimates.

† Savings estimated based on an average landfill disposal fee of \$47.50 per ton.

In addition to the projects awarded in Fiscal Year 2012, the Missouri Market Development Program managed projects that received awards in previous years.

Table 2. Summary of Active Projects Awarded Prior to Fiscal Year 2012

| Company | City | Material | Estimated Tons Diverted Annually | Estimated New Jobs | Award | Total Amount Leveraged | Estimated Payroll Addition* | Estimated Cost Savings Annually† |
|--|-----------|----------|----------------------------------|--------------------|----------|------------------------|-----------------------------|----------------------------------|
| All Points Recycling, LLC | Cassville | Plastics | 224 | 2 full-time | \$45,500 | \$45,500 | \$65,400 | \$10,640 |
| Braik Brothers Tree Care & Green Waste | Columbia | Wood | 2,500 | 2 full-time | \$50,000 | \$400,000 | \$65,400 | \$118,750 |

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|---------------------------------------|-------------------|-------------------------------------|---------|--------------|----------|-------------|-----------|--------------|
| EXT, Inc. | Excelsior Springs | Plastics | 200 | 2 full-time | \$46,000 | \$106,187 | \$65,400 | \$9,500 |
| Bryant Plastics, Inc. | Gainesville | Plastics | 240 | 3 full-time | \$50,000 | \$50,000 | \$98,100 | \$11,400 |
| Foundation Workshop, Inc. | Grandview | Plastics | 156 | 2 full-time | \$35,000 | \$47,133 | \$65,400 | \$7,410 |
| Enginuity, LLC | Hartville | Plastics | 2,500 | 9 full-time | \$50,000 | \$100,000 | \$294,300 | \$118,750 |
| GT Management, LLC | Joplin | Concrete | 6,000 | 2 full-time | \$50,000 | \$100,000 | \$65,400 | \$285,000 |
| Missouri Organics Recycling, Inc. | Kansas City | Food Waste | 4,500 | | \$35,000 | \$67,000 | | \$213,750 |
| Thomason Brothers, Inc. | Mansfield | Food Waste | 20,000 | 9 full-time | \$50,000 | \$175,000 | \$294,300 | \$950,000 |
| Randolph County Sheltered Industries | Moberly | Wood | 150 | 6 part-time | \$50,000 | \$75,000 | \$98,100 | \$7,125 |
| 3-G Processing, LLC | Mountain Grove | Food Waste | 260,000 | 30 full-time | \$50,000 | \$910,000 | \$981,000 | \$12,350,000 |
| Customix Corp. | Mountain Grove | Food Waste | 6,000 | 5 full-time | \$50,000 | \$120,000 | \$163,500 | \$285,000 |
| Rustique Enterprises, Inc. | O'Fallon | Plastics | 300 | 4 full-time | \$50,000 | \$100,000 | \$130,800 | \$14,250 |
| BFC Composting | Perryville | Organics | 3,360 | 2 full-time | \$50,000 | \$146,000 | \$65,400 | \$159,600 |
| Sikeston Community Sheltered Workshop | Sikeston | Wood | 1,450 | 1 full-time | \$50,000 | \$222,198 | \$32,700 | \$68,875 |
| Nike IHM | St. Charles | Plastics | 550 | 4 full-time | \$50,000 | \$350,000 | \$130,800 | \$26,125 |
| Hampton Alternative Energy Products | Triplett | Animal and Ethanol Production Waste | 21,462 | 2 full-time | \$50,000 | \$3,000,000 | \$65,400 | \$1,019,445 |
| Fick Supply Service, Inc. | Wildwood | Wood | 18,750 | 1 full-time | \$50,000 | \$628,400 | \$32,700 | \$890,625 |

* Payroll estimated as \$32,700 per job based on the 2000 RW Beck REI study estimates.

† Savings estimated based on an average landfill disposal fee of \$47.50 per ton.

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Table 3. Summary of Fiscal Years 2008 to 2012 Completed Projects

| Company | City | Material | Estimated Tons Diverted Annually | Estimated New Jobs | Award | Total Amount Leveraged | Estimated Payroll Addition* | Estimated Cost Savings Annually† |
|---|-------------------|---------------------|----------------------------------|-----------------------------|-----------|------------------------|-----------------------------|----------------------------------|
| Central Missouri Poultry Producers | Barnett | Animal Waste | 200 | 2 part-time | \$23,332 | \$31,100 | \$32,700 | \$9,500 |
| Windswept Worm Farm | Blue Springs | Food and Yard Waste | 336 | 1 full-time | \$35,000 | \$70,000 | \$32,700 | \$15,960 |
| All Points Recycling, LLC | Cassville | Plastics | 224 | 2 full-time | \$45,500 | \$65,575 | \$65,400 | \$10,640 |
| Alternative Community Training, Inc. | Columbia | Plastic | 200 | 3 full-time | \$50,000 | \$71,000 | \$98,100 | \$9,500 |
| Braik Brothers Tree Care & Green Waste Recycling, LLC | Columbia | Wood | 2,500 | 2 full-time | \$50,000 | \$400,000 | \$65,400 | \$118,750 |
| EXT, Inc. | Excelsior Springs | Plastics | 200 | 2 full-time | \$46,000 | \$106,187 | \$65,400 | \$9,500 |
| Bryant Plastics, Inc. | Gainesville | Plastics | 240 | 3 full-time | \$50,000 | \$104,500 | \$98,100 | \$11,400 |
| Foundation Workshop, Inc. | Grandview | Plastics | 156 | 2 full-time | \$35,000 | \$47,133 | \$65,400 | \$7,410 |
| Enginuity, LLC (2 projects) | Hartville | Plastics | 2,750 | 11 full-time 5 part-time | \$100,000 | \$210,000 | \$441,450 | \$130,625 |
| Asphalt Products, Inc. | Jefferson City | Roofing Materials | 10,000 | 1 part-time | \$50,000 | \$95,000 | \$16,375 | \$475,000 |
| GT Management, LLC | Joplin | Concrete | 6,000 | 2 full-time | \$50,000 | \$100,000 | \$65,400 | \$285,000 |
| Swift Construction Company, Inc. | Joplin | Roofing Materials | 75,000 | 1 full-time | \$50,000 | \$105,000 | \$32,700 | \$3,562,500 |
| Missouri Organics Recycling, Inc. | Kansas City | Food Waste | 4,500 | 0 | \$35,000 | \$67,000 | | \$213,750 |
| Performance Roofing Systems, Inc. | Kansas City | Roofing Material | 450 | 1 full-time | \$50,000 | \$150,000 | \$32,700 | \$21,375 |

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| Loganbill Enterprises, Inc. | Latham | Wood | 2,750 | 4 full-time | \$35,000 | \$70,000 | \$130,800 | \$130,625 |
| Eharas Services & Solution, Inc. | Liberty | Wood | 18,240 | 2 full-time | \$50,000 | \$579,496 | \$65,400 | \$874,950 |
| Thomas Brothers, Inc. (2 projects) | Mansfield | Food Waste | 31,700 | 18 full-time | \$100,000 | \$200,000 | \$588,600 | \$1,505,750 |
| Randolph County Sheltered Industries | Moberly | Wood | 150 | 6 part-time | \$50,000 | \$75,000 | \$98,100 | \$7,125 |
| 3-G Processing, LLC | Mountain Grove | Food Waste | 260,000 | 30 full-time | \$50,000 | \$910,000 | \$981,000 | \$12,350,000 |
| Customix Corp. | Mountain Grove | Food Waste | 6,000 | 5 full-time | \$50,000 | \$120,000 | \$163,500 | \$285,000 |
| B&G Skid Removal, LLC | New Bloomfield | Wood | 3,200 | 1 full-time | \$50,000 | \$196,000 | \$32,700 | \$152,000 |
| Hanson Tree Service & Environmental Wood Resources | O'Fallon | Wood | 5,900 | 1 full-time | \$50,000 | \$152,600 | \$32,700 | \$280,250 |
| Rustique Enterprises, Inc. | O'Fallon | Plastics | 300 | 4 full-time | \$50,000 | \$100,000 | \$130,800 | \$14,250 |
| Double G Brands, Inc. | Pacific | Food Waste | 100 | 4 full-time | \$50,000 | \$125,000 | \$130,800 | \$4,750 |
| Eco Recycling, Inc. | Pagedale | Concrete and Roofing Materials | 93,000 | 12 full-time | \$50,000 | \$80,000 | \$392,400 | \$4,417,500 |
| BFC Composting | Perryville | Organics | 3,360 | 2 full-time | \$50,000 | \$50,000 | \$65,400 | \$159,600 |
| Sikeston Community Sheltered Workshop | Sikeston | Wood | 1,450 | 1 full-time | \$50,000 | \$222,198 | \$32,700 | \$68,875 |
| Coon Manufacturing, Inc. | Spickard | Plastics | 665 | 2 full-time | \$50,000 | \$98,060 | \$65,400 | \$31,588 |
| Cedar Ridge Innovations, LLC | Springfield | Plastics | 672 | 5 full-time | \$50,000 | \$68,000 | \$163,500 | \$31,920 |
| Nike IHM | St. Charles | Plastics | 550 | 4 full-time | \$50,000 | \$350,000 | \$130,800 | \$26,125 |
| Prock Operations, Inc. | St. James | Composite | 24 | 3 full-time | \$50,000 | \$78,900 | \$98,100 | \$1,140 |

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|-------------------------------------|-----------|-------------------------------------|---------|-------------------------------|-------------|-------------|-------------|--------------|
| Remains, Inc. | St. Louis | Cloth | 460 | 3 full-time | \$36,250 | \$72,500 | \$98,100 | \$21,850 |
| Hampton Alternative Energy Products | Triplet | Animal and Ethanol Production Waste | 21,462 | 2 full-time | \$50,000 | \$50,000 | \$65,400 | \$1,019,445 |
| Fick Supply Service, Inc. | Wildwood | Wood | 18,750 | 1 full-time | \$50,000 | \$628,400 | \$32,700 | \$890,625 |
| Total | | | 571,489 | 118 full-time 13 part-time | \$2,006,082 | \$5,571,474 | \$4,610,755 | \$27,154,278 |

* Payroll estimated as \$32,700 per job based on the 2000 RW Beck REI study estimates.

† Savings estimated based on an average landfill disposal fee of \$47.50 per ton.

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Contractual Services: Financial Assistance for the Development of New Products and Markets

Appendix 2: Technical Assistance to Businesses

The Missouri Market Development program provides financial assistance to individuals and organizations for the purpose of developing new recycled products to be manufactured in Missouri or new markets for Missouri recycled products. Recipients contract professional technical and business services, identify sources of recycled materials, conduct testing on the suitability of recycled materials for use in products, study the feasibility of recycled-content products, analyze markets for such products, and similar product and market development activities. Awards may cover up to 75 percent of a project, with a maximum award of \$20,000.

Table 2. Summary of Fiscal Year 2012 Contractual Services

| Company | City | Material | Award | Total Amount Leveraged |
|--------------------|------------|----------|----------|------------------------|
| Real Greenius, LLC | Billings | Plastics | \$8,775 | \$11,700 |
| Freiezo, LLC | St. Peters | Plastics | \$10,000 | \$24,752.73 |
| Total | | | \$18,775 | \$36,452.73 |

Table 3. Summary of Fiscal Years 2008 to 2012 Contractual Services

| Company | City | Material | Award | Total Amount Leveraged |
|--------------------------------------|------------------|---------------------|---------|------------------------|
| Real Greenius, LLC | Billings | Plastics | \$8,775 | \$11,700 |
| Hardwoods of Missouri | Birch Tree | Wood | \$5,000 | \$10,000 |
| Windswept Worm Farm | Blue Springs | Worm Castings | \$3,500 | \$7,000 |
| Chadwick R-1 School District | Chadwick | Wood and Food Waste | \$5,000 | \$8,000 |
| Alternative Community Training, Inc. | Columbia | Plastics | \$5,000 | \$9,000 |
| Black River Asphalt, LLC | Ellington | Glass and Rubber | \$6,000 | \$12,000 |
| Foundation Workshop, Inc. | Grandview | Plastics | \$2,350 | \$9,350 |
| Ceramo Company, Inc. | Jackson | Clay Pottery Waste | \$6,500 | \$13,000 |
| Johnson Controls | Kansas City | Plastics | \$3,000 | \$9,800 |
| KTSI, Inc. | Kansas City | Textiles | \$3,000 | \$10,000 |
| Orco Industries, LLC | LaGrange | Plastics | \$3,500 | \$10,000 |
| Earthwise Engineered Wall Systems | Lake Saint Louis | Plastics | \$6,000 | \$12,000 |
| Pillar Group, LLC | Monett | Spent Powder Paint | \$5,000 | \$10,000 |

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|--|-----------------|-------------------------|-----------|--------------|
| Turfline Incorporated | Moscow Mills | Wood | \$3,000 | \$6,000 |
| Boreflex Industries, Inc. | Mountain Grove | Plastics | \$4,000 | \$5,000 |
| Noranda Aluminum, Inc. | New Madrid | Wood | \$6,500 | \$13,000 |
| Caterpillar High Performance Hose Group | Pomona | Rubber | \$3,400 | \$10,800 |
| Ozark Foothills Regional Planning Commission | Poplar Bluff | Various | \$5,000 | \$10,000 |
| Chapman Custom Products | Rolla | Solid-Surface Materials | \$12,000 | \$150,000 |
| Arcabasso Foods, Inc. | St. Louis | Food Waste | \$6,000 | \$12,000 |
| EMA, Inc. | St. Louis | Glass | \$5,000 | \$7,500 |
| Firmenich, Inc. | St. Louis | Food Waste | \$5,000 | \$10,000 |
| Lambert-St. Louis International Airport | St. Louis | Food Waste | \$5,000 | \$7,500 |
| Seiler Plastics Corporation | St. Louis | Plastics | \$3,000 | \$7,500 |
| St. Louis Help | St. Louis | | \$4,000 | \$8,000 |
| The Doe Run Company | St. Louis | Cardboard | \$3,500 | \$7,000 |
| Freiezo (2 projects) | St. Peters | Plastics | \$8,000 | \$13,000 |
| Freiezo, LLC | St. Peters | Plastics | \$10,000 | \$24,752.73 |
| Happy Apply Company | Union | Food Waste | \$5,000 | \$10,000 |
| Highland Homes | University City | Construction Waste | \$5,000 | \$10,000 |
| Advanced Concepts Technology LLC | Willard | Scrap Tires | \$3,000 | \$10,000 |
| Total | | | \$159,025 | \$505,202.73 |

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Information Services: Informing the Recyclables Market of Opportunities

Appendix 3: Information Services

In fiscal year 2012, the Missouri Market Development Program continued to support the Kansas City Regional By-product Synergy Initiative, a project that applies the principals of industrial ecology in a facilitated process in which individual companies work together as a cross-industry team focused on turning every byproduct into valuable new products.

This collaborative, business-driven approach enlists industry to address waste and pollution issues. The synergies uncovered are expected to produce added revenues and cost savings, new business opportunities, and environmental and regulatory benefits to the group and to the region. During the fiscal year, the Missouri Market Development Program and its partner, Bridging the Gap, finalized plans to carry the byproduct synergy process forward via www.midwestmaterialsexchange.com, an online marketplace that facilitates the reuse, repurposing and recycling of unwanted materials and wastestreams.

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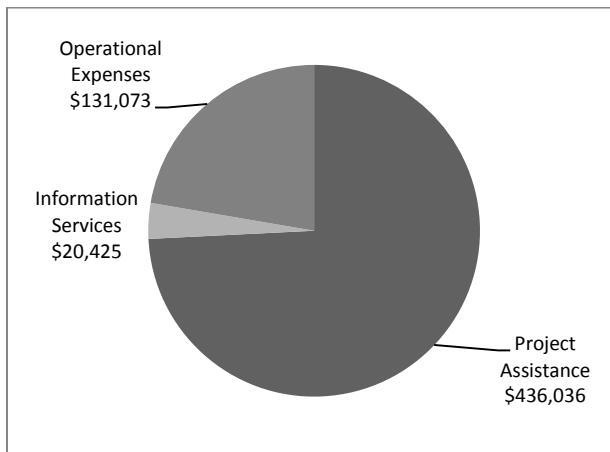


Funding: Investing in Missouri's Economy and Environment

Appendix 4: Fiscal Years 2008-2012 Expenditures

In fiscal year 2012, the Missouri Market Development Program was allocated \$800,000 from the Missouri Solid Waste Management Fund. These funds were expended to provide financial assistance to businesses and information services for producers and buyers of recycled products.

Figure 1. Distribution of Expenditures for Fiscal Year 2012



During the five-year period of 2008 to 2012, the Missouri Market Development Program drew \$3.2 million from the Solid Waste Management Fund. More than 76 percent of these funds were used to provide project assistance, contractual services and information services to Missouri businesses and organizations.